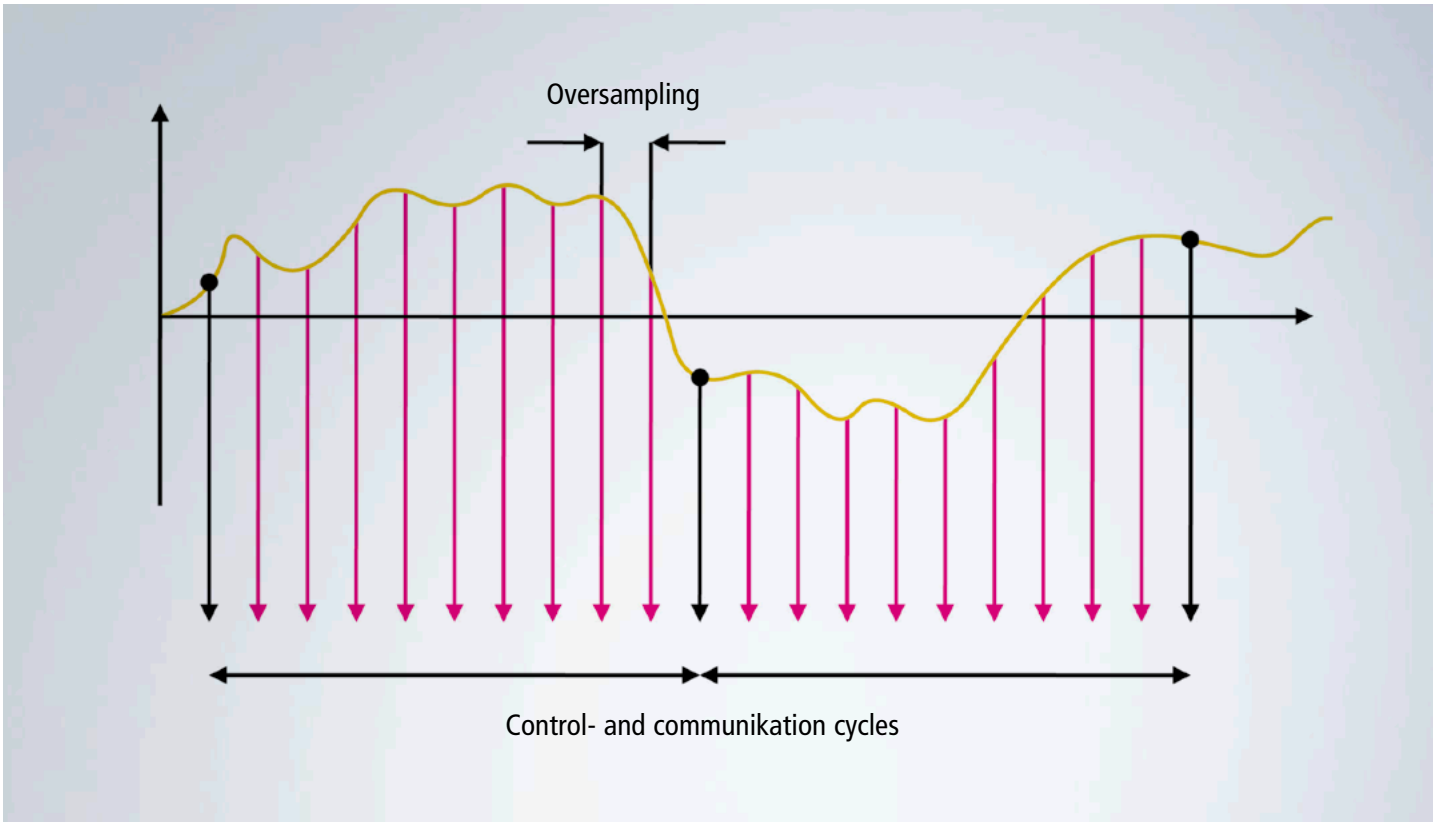

The compact AX8000 multi-axis servo system now also supports the oversampling technology familiar from EtherCAT Terminals.

AX8000: high-performance, multi-axis servo system supports oversampling technology

Shortest control cycles now combined with multiple sampling per communication cycle

The high-performance AX8000 multi-axis servo system from Beckhoff is characterized by extremely high dynamics and very short cycle times. The motor current is scanned in µs cycles and the minimum adjustable EtherCAT cycle time is 62.5 µs. Through the support of oversampling technology, process data can now even be scanned several times within a communication cycle if required and transferred to the controller via EtherCAT.

With the highly dynamic EtherCAT-based AX8000 servo system, new setpoint values can be transferred every 62.5 µs from the motion controller in the Industrial PC to the servo drive. Comparable control systems usually operate with a cycle time of only 1 ms. Now the AX8000 firmware additionally supports oversampling technology familiar from Beckhoff EtherCAT I/Os. This enables multiple sampling of process data within a communication cycle with an oversampling factor of up to 128 and the transfer of all data in an array via EtherCAT. This enables the higher-level controller to transmit several setpoint positions or speeds to the drive within one communication cycle, which the drive then follows. In addition, measured variables can be recorded several times in the drive and the buffered values can be made available to the controller within one cycle. In this way, a chart in TwinCAT Scope View can be resolved even more finely, for example.

Synchronization with other drives – with or without oversampling functionality – is possible without any problems through the distributed clocks function of the EtherCAT system. The oversampling method is used in precision processing machines and in other machines and systems for which the evaluation of high-resolution measured values is a technological requirement.

More information:
www.beckhoff.com/ax8000